

Serial No.: 10/050,492
Amendment and Response

IN THE CLAIMS

Please amend the claims as follows:

1. (cancelled)

2. (cancelled)

3. (cancelled)

2 ~~4~~ (previously amended) The system of Claim ~~5~~, wherein the target element is a poultry product.

B¹ 1 ~~5~~ (currently amended) In a system to control pathogens on a target element, the system including subjecting the target element to a ~~disinfectant~~ pathogen reducing agent, the improvement comprising subjecting the target element to hypochlorous acid formed by the following steps:

- (a) combining an acid with a first carrier stream to form a first mixed stream;
- (b) introducing a chlorination agent into a control stream, the chlorination agent increasing the concentration of hypochlorous acid and hypochlorite of the control stream;
- (c) combining the first mixed stream with the control stream having the chlorination agent to form the hypochlorous acid stream, wherein about 77 to about 99 percent of the chlorination agent in the hypochlorous acid stream is hypochlorous acid.

6. (cancelled)

7. (cancelled)

B² 3 ~~8~~ (original) The system of Claim ~~5~~, wherein after combining the first mixed stream with the control stream, the pH of the hypochlorous acid stream is between approximately 4.3 and approximately 7.0.

4 ~~9~~ (original) The system of Claim ~~5~~, wherein the first mixed stream is pressurized.

5 ~~10~~ (original) The system of Claim ~~5~~, wherein the control stream with a chlorination agent is pressurized.

6 ~~11~~ (original) The system of Claim ~~5~~, wherein the acid includes carbon dioxide.

7 ~~12~~ (original) The system of Claim ~~5~~, wherein the first carrier stream is pressurized to at least about 50 psi.

13. (cancelled)

B³ 10 ~~14~~ (previously amended) The system of Claim ~~15~~, wherein the hypochlorous acid is in the form of a hypochlorous acid stream of between about 4.3 and 7.0 pH.

Serial No.: 10/050,492
Amendment and Response

9. ~~15~~ (previously amended) In a system for controlling pathogens during the processing of animals into food including conveying an animal carcass through processing equipment, the improvement comprising subjecting the animal carcass to hypochlorous acid formed by the following steps:

(a) acidifying a first carrier stream to form a first mixed stream, wherein the first mixed stream comprises carbonic acid;

(b) introducing a chlorination agent into a control stream, the chlorination agent increasing the concentration of hypochlorous acid and hypochlorite of the control stream;

(c) combining the first mixed stream with the control stream having the chlorination agent to form the hypochlorous acid stream.

11 ~~16~~ (previously amended) The system of Claim ~~15~~, wherein the animal carcass is conveyed through a pick/kill area, wherein the animal carcass is subjected to a hypochlorous acid stream in the pick/kill area.

12 ~~17~~ (previously amended) The system of Claim ~~15~~, wherein the animal carcass is conveyed through an evisceration area, wherein the animal carcass is subjected to a hypochlorous acid stream in the evisceration area.

15 ~~18~~ (previously amended) The system of Claim ~~15~~, wherein the animal carcass is conveyed through a chilling area, wherein the animal carcass is subjected to a hypochlorous acid stream in the chilling area.

13 ~~19~~ (original) The system of Claim ~~18~~ wherein the animal carcass also is conveyed through an evisceration area, wherein the animal carcass is subjected to a hypochlorous acid stream in the evisceration area.

14 ~~20~~ (original) The system of Claim ~~19~~ wherein the animal carcass also is conveyed through a chilling area, wherein the animal carcass is subjected to a hypochlorous acid stream in the chilling area.

17 ~~21~~ (previously added) A method to control pathogens on a target element, the method comprising the following steps:

(a) combining an acid with a pressurized first carrier stream to form a pressurized first mixed stream;

Serial No.: 10/050,492
Amendment and Response

- (b) introducing a chlorination agent into a control stream, the chlorination agent increasing the concentration of hypochlorous acid and hypochlorite of the control stream;
- (c) combining the first pressurized mixed stream with the control stream having the chlorination agent to form the hypochlorous acid stream; and
- (d) contacting a said target element with the hypochlorous acid stream.

18 ~~22~~ (previously added) The method of claim ~~22~~¹⁷ wherein the target element is selected from the group consisting of an animal and a carcass.

19 ~~23~~ (amended) The ~~system~~ method of Claim ~~23~~¹⁷, wherein the target element is conveyed through a pick/kill area, wherein the target element is subjected to a hypochlorous acid stream in the pick/kill area.

20 ~~24~~ (amended) The ~~system~~ method of Claim ~~24~~¹⁷, wherein the target element is conveyed through an evisceration area, wherein the target element is subjected to a hypochlorous acid stream in the evisceration area.

21 ~~25~~ (amended) The ~~system~~ method of Claim ~~25~~¹⁷, wherein the target element is conveyed through a chilling area, wherein the target element is subjected to a hypochlorous acid stream in the chilling area.

26. (cancelled)

22 ~~27~~ (amended) The ~~system~~ method of Claim ~~27~~¹⁷, wherein the target element also is conveyed through a chilling area, wherein the target element is subjected to a hypochlorous acid stream in the chilling area.

23 ~~28~~ (currently amended) ~~In a system to control pathogens on a target element, the system including subjecting the target element to a disinfectant, the improvement comprising subjecting the target element to hypochlorous acid formed by the following steps:~~

- ~~(a) forming an acid in a first carrier stream to form a first mixed stream;~~
- ~~(b) introducing a chlorination agent into a control stream, the chlorination agent increasing the concentration of hypochlorous acid and hypochlorite of the control stream; and~~
- ~~(c) combining the first mixed stream with the control stream having the chlorination agent to form the hypochlorous acid stream;~~ The method of Claim ~~28~~¹⁷ wherein the pH of the hypochlorous acid stream is between approximately 4.3 and approximately 7.0.

29. (cancelled)

Serial No.: 10/050,492
Amendment and Response

30. (cancelled)

31. (cancelled)

32. (cancelled)

33. (cancelled)

34. (cancelled)

25 ~~35~~ (currently amended) In a system to control pathogens on a target element, the system including subjecting the target element to a ~~disinfectant~~ pathogen reducing agent, the improvement comprising subjecting the target element to hypochlorous acid formed by the following steps:

(a) forming an acid in a first carrier stream to form a first mixed stream;

(b) introducing a chlorination agent into a control stream, the chlorination agent increasing the concentration of hypochlorous acid and hypochlorite of the control stream, and wherein the control stream with the chlorination agent is pressurized; and

(c) combining the first mixed stream with the pressurized control stream having the chlorination agent to form the hypochlorous acid stream; and

(d) contacting said target element with the hypochlorous acid stream.

26 ~~36~~ (previously added) The method of claim ~~35~~²⁵, wherein the target element is selected from the group consisting of an animal and a carcass.

27 ~~37~~ (previously added) The system of Claim ~~35~~²⁵, wherein the target element is conveyed through a pick/kill area, wherein the target element is subjected to a hypochlorous acid stream in the pick/kill area.

28 ~~38~~ (previously added) The system of Claim ~~36~~²⁵, wherein the target element is conveyed through an evisceration area, wherein the target element is subjected to a hypochlorous acid stream in the evisceration area.

29 ~~39~~ (previously added) The system of Claim ~~35~~²⁵, wherein the target element is conveyed through a chilling area, wherein the target element is subjected to a hypochlorous acid stream in the chilling area.

30 ~~40~~ (previously added) The system of Claim ~~35~~²⁵, wherein the target element also is conveyed through an evisceration area, wherein the target element is subjected to a hypochlorous acid stream in the evisceration area.

Serial No.: 10/050,492
Amendment and Response

31 ~~41~~ (previously added) The system of Claim ~~35~~²⁵, wherein the target element also is conveyed through a chilling area, wherein the target element is subjected to a hypochlorous acid stream in the chilling area.

84 8 ~~42~~ (new) The system of Claim ~~35~~¹, wherein the target element is a food item.

16 ~~43~~ (new) The system of Claim ~~15~~⁹, wherein the target element is a food item.

24 ~~44~~ (new) The method of Claim ~~21~~¹⁷, wherein the target element is a food item.

32 ~~45~~ (new) The system of Claim ~~35~~²⁵, wherein the target element is a food item.